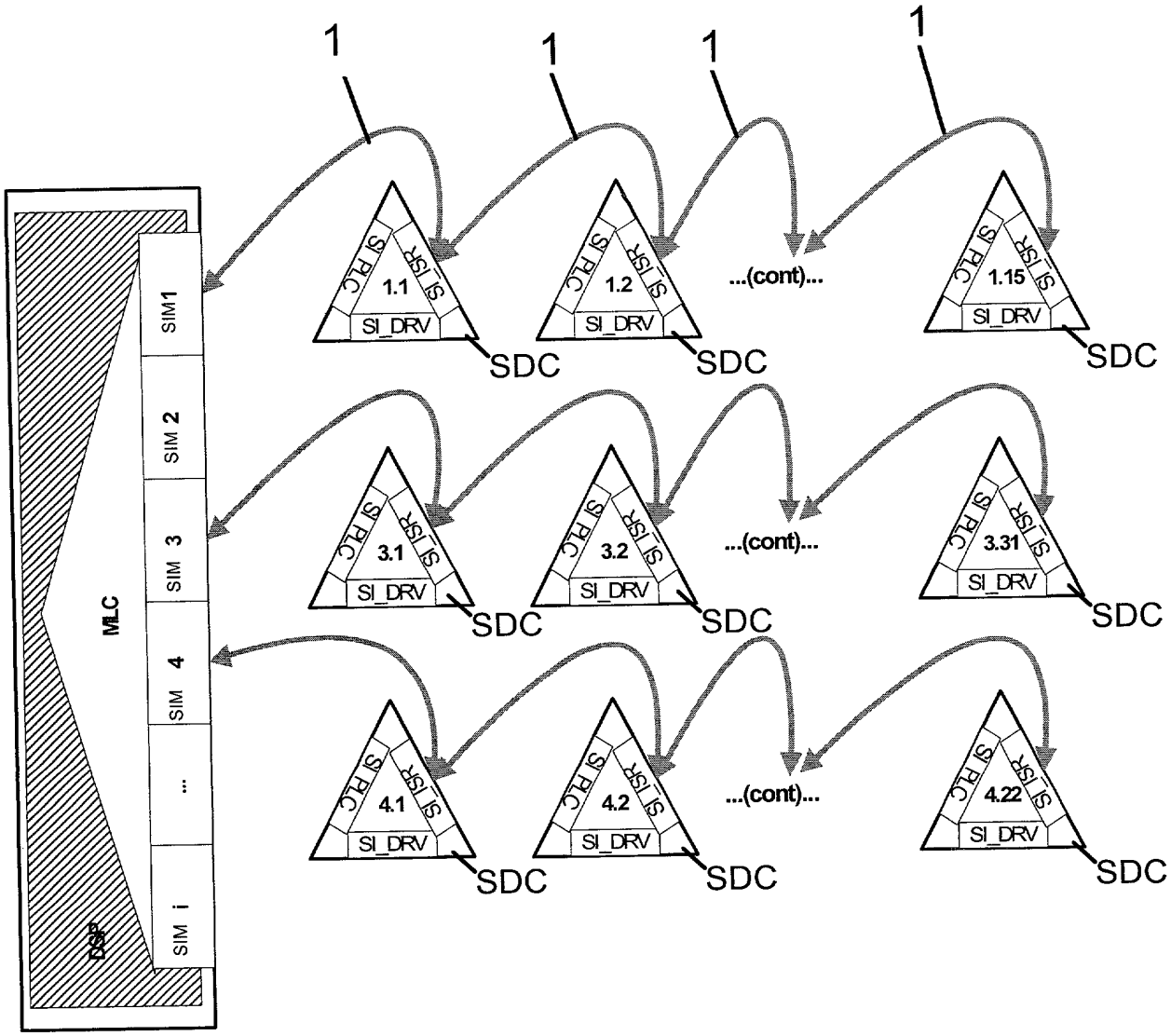
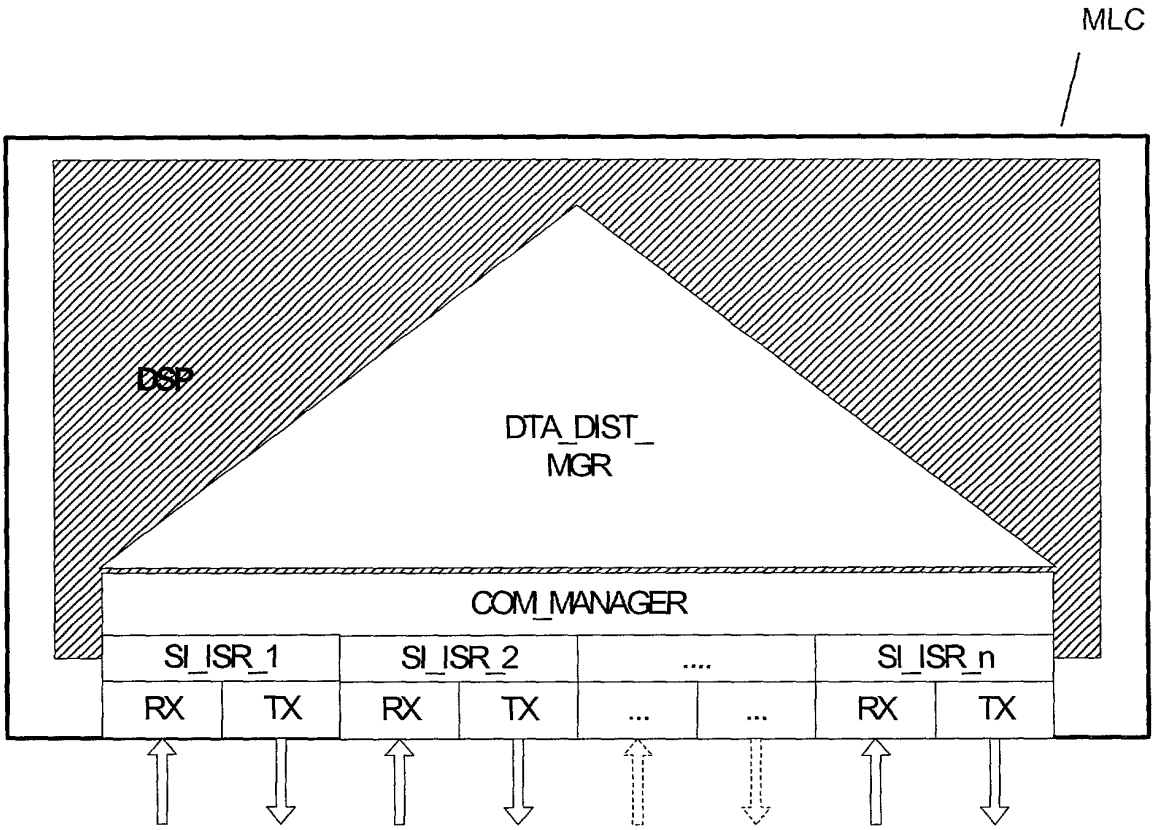


Multiple Section Network

Example with MLC and 3 ISR networks of different size and numbering
DSP - digital signal processor
SI_PLC - serial interface to process control network (not drawn)
SI_ISR - serial interface to inter SDC network
SI_DRV - serial interface to drive network (not drawn)

Fig. 1

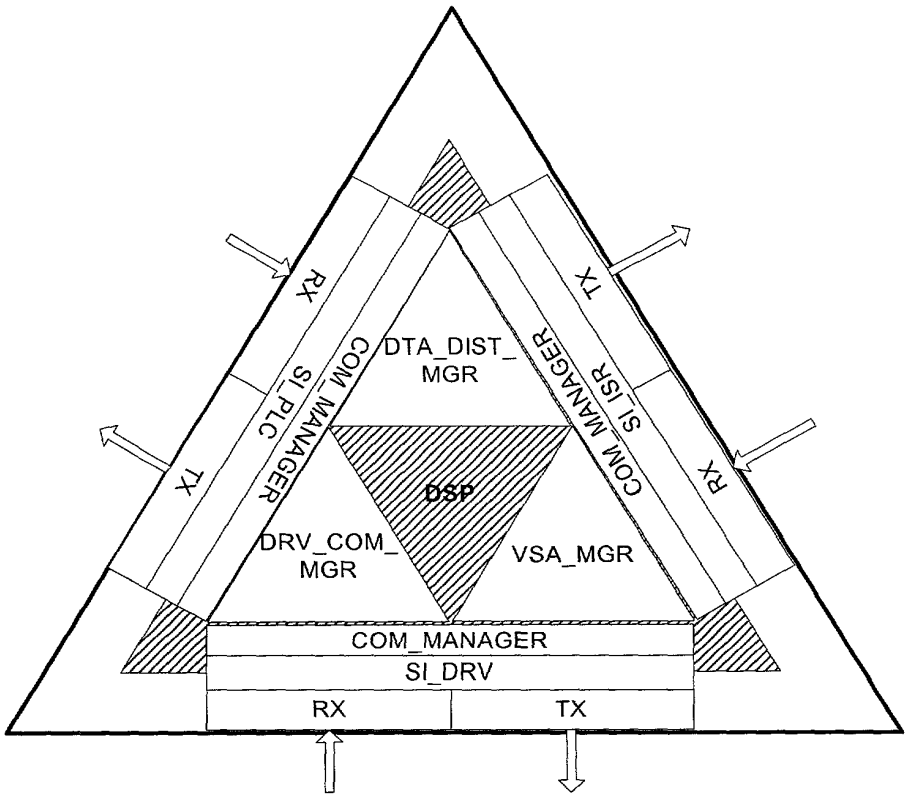


MLC - Multi Link Controller

DSP - digital signal processor
DTA_DIST_MGR - module to manage the data flow between the networks
SI_ISR_x - serial interface to inter SDC network x
COM_MANAGER - modules to manage the communication over that interface
TX - transmit interface at communication interface
RX - receive interface at communication interface

Fig. 2

SDC



SDC - SyncDrive Controller

DSP - digital signal processor
DRV_COM_MGR - module to manage the data flow from and to drive network
VSA_MGR - module to manage the virtual synchronisation axis function
DTA_DIST_MGR - module to manage the data flow between the networks
SI_PLC - serial interface to process control network
SI_ISR - serial interface to inter SDC network
SI_DRV - serial interface to drive network
COM_MANAGER - modules to manage the communication over that interface
TX - transmit interface at communication interface
RX - receive interface at communication interface

Fig. 3

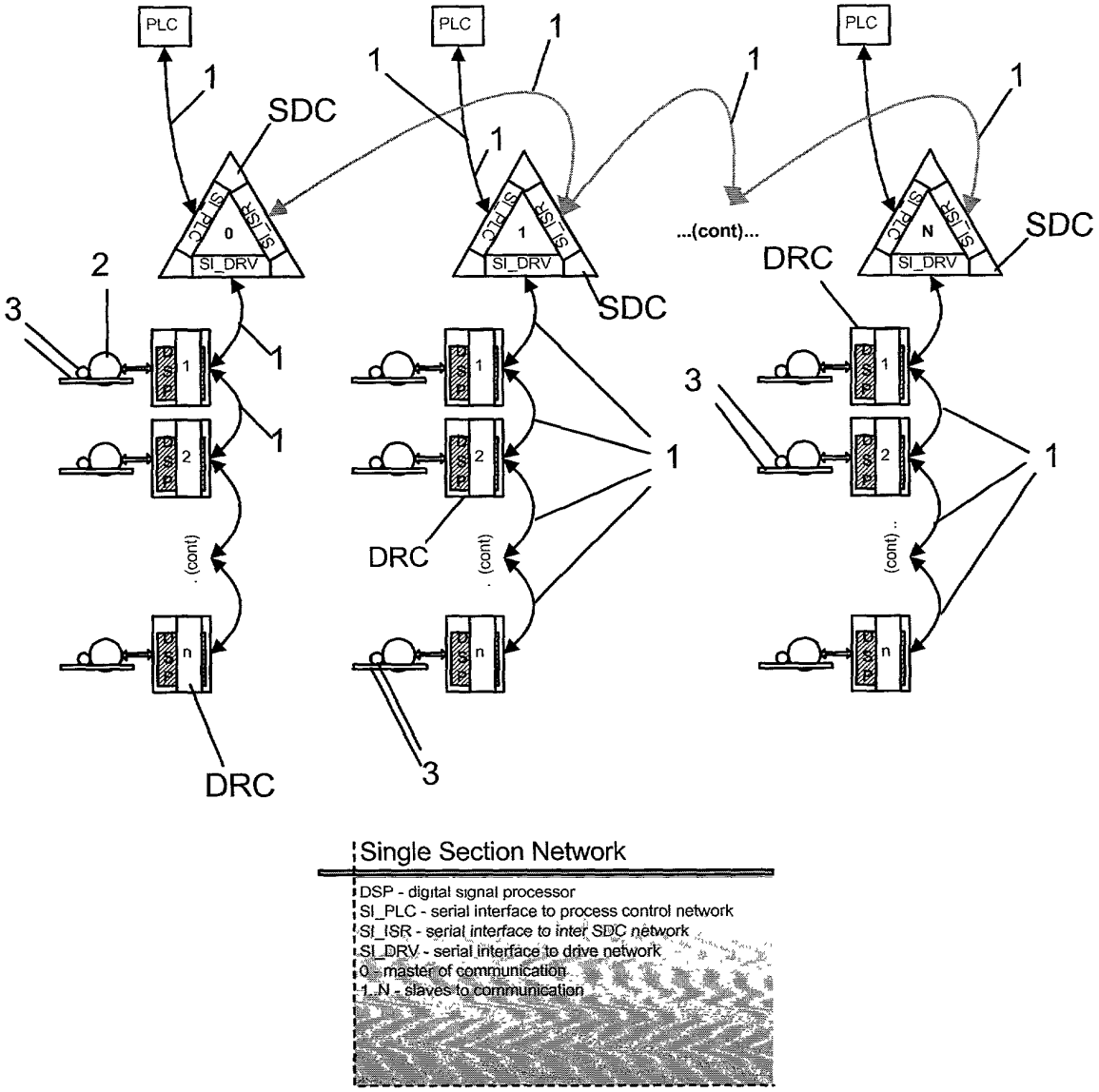
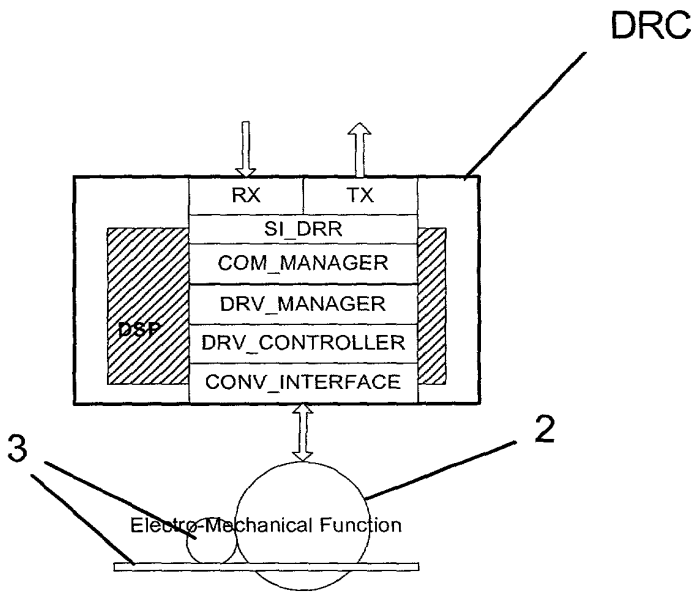

PLC
PLC
PLC
SDC
SDC
SDC
SI_PLC
SI_ISR
SI_DRV
0
1
N
...(cont)...
DRC
DRC
DRC
(cont)
(cont)
(cont)
1
2
n
3
Single Section Network
DSP - digital signal processor
SI_PLC - serial interface to process control network
SI_ISR - serial interface to inter SDC network
SI_DRV - serial interface to drive network
0 - master of communication
1..N - slaves to communication

Fig. 4



DRC - Drive Controller

DSP - digital signal processor
CONV_INTERFACE - module to manage the motor converter
DRV_CONTROLLER - module to control the drive (torque, acceleration, speed, position, actual & set values, etc.)
DRV_MANAGER - module to manage the drive function (technology, behaviour, diagnostics, etc.)
SI_DRR - serial interface to drives network
COM_MANAGER - modules to manage the communication over that interface
TX - transmit interface at communication interface
RX - receive interface at communication interface

Fig. 5

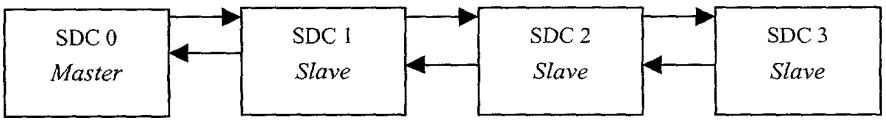


Fig. 6

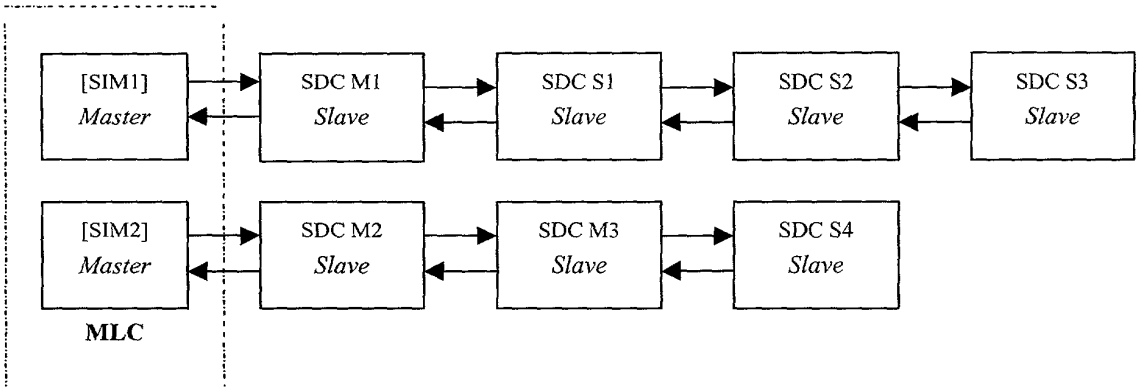


Fig. 7

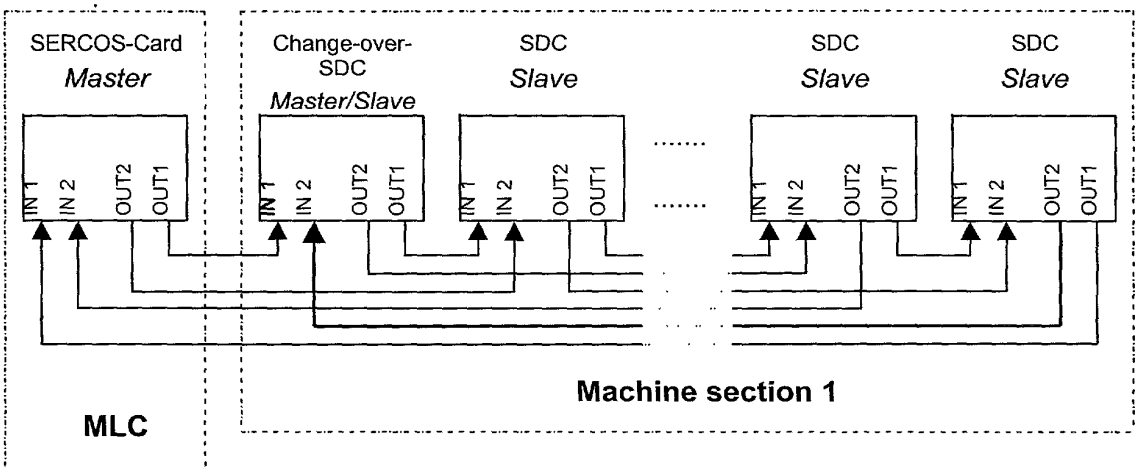


Fig. 8

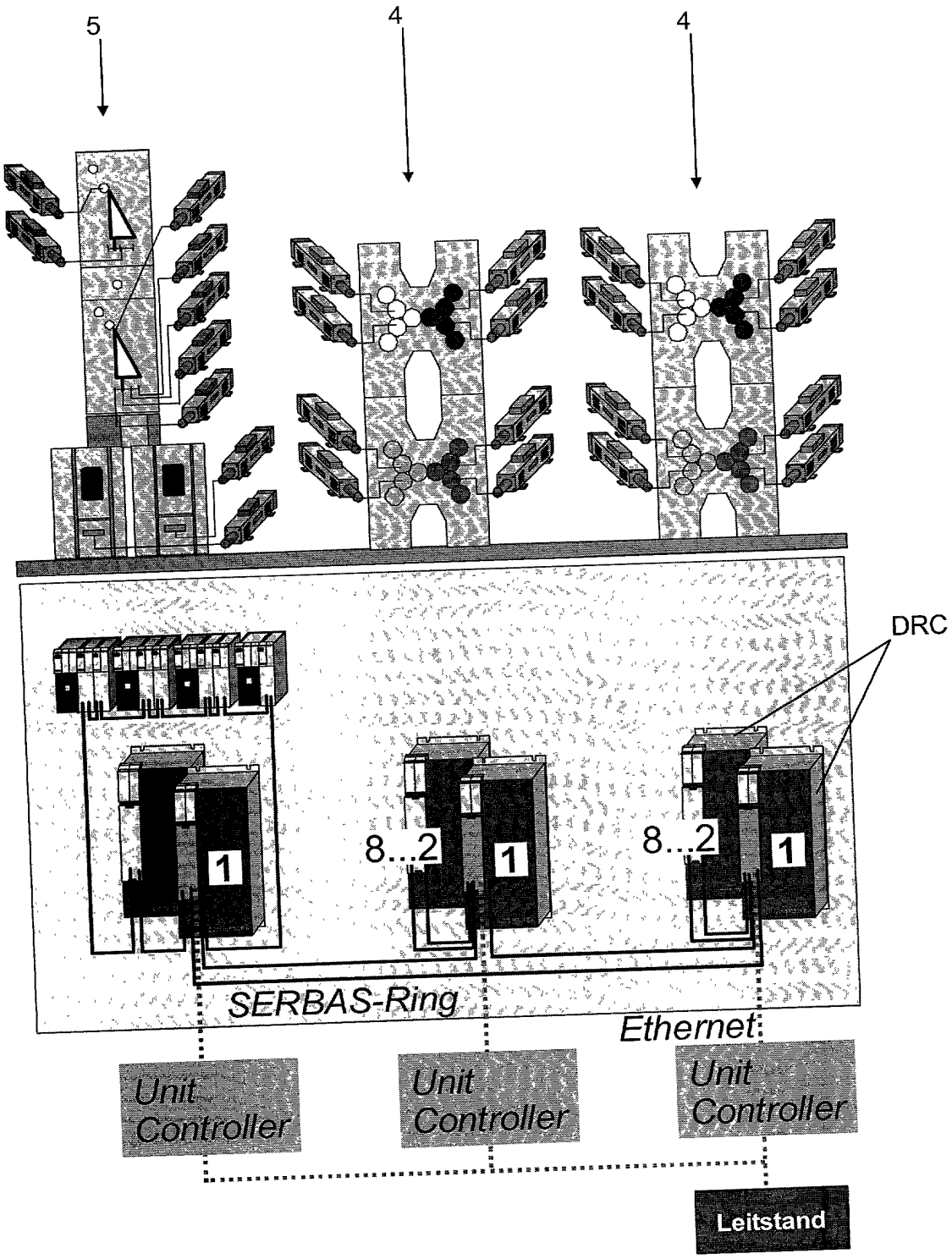

5
4
4
DRC
1
8...2
1
8...2
1
SERBAS-Ring
Ethernet
Unit Controller
Unit Controller
Unit Controller
Leitstand

Fig. 9

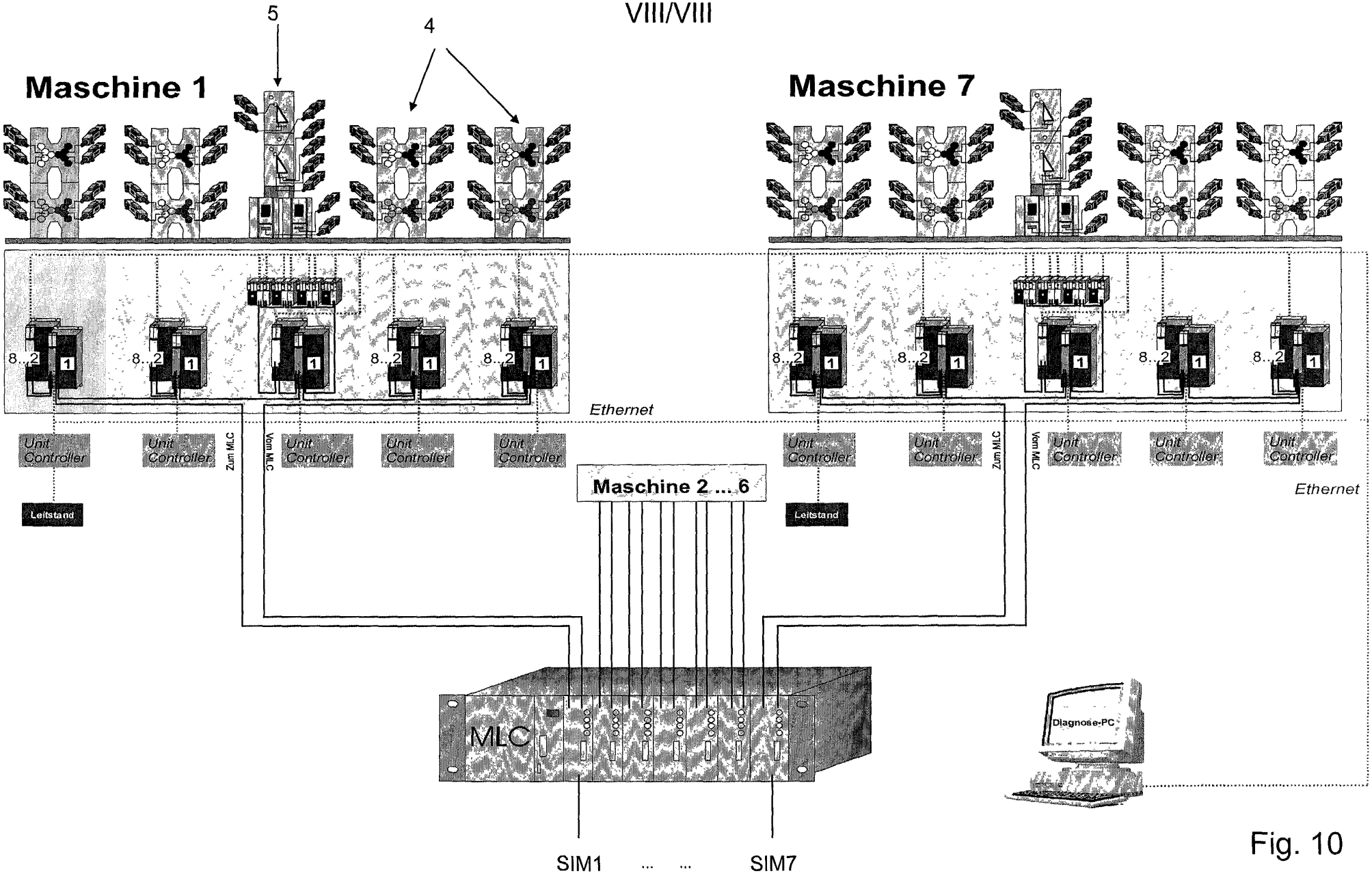

5
4
Maschine 1
Maschine 7
8..2
1
Ethernet
Unit Controller
Zum MLC
Vom MLC
Maschine 2 ... 6
Leitstand
Ethernet
MLC
Diagnose-PC
SIM1
...
...
SIM7

Fig. 10